

NATIONAL DEFENSE UNIVERSITY
NATIONAL WAR COLLEGE

**HOMESPUN AND MICROCHIPS:
INDIA'S ECONOMIC DICHOTOMY**

Mr. ERIC L. DAHLSTROM, DIA
COURSE 5604
THE GLOBAL SECURITY ARENA
SEMINAR L

PROFESSOR
DR. BARD E. O'NEILL

ADVISOR
MR. THEODORE M. LAVEN

Report Documentation Page				Form Approved OMB No. 0704-0188	
Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.					
1. REPORT DATE 2003		2. REPORT TYPE		3. DATES COVERED 00-00-2003 to 00-00-2003	
4. TITLE AND SUBTITLE Homespun and Microchips: India's Economic Dichotomy				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S)				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) National War College, 300 5th Avenue, Fort Lesley J. McNair, Washington, DC, 20319-6000				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release; distribution unlimited					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT see report					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES 15	19a. NAME OF RESPONSIBLE PERSON
a. REPORT unclassified	b. ABSTRACT unclassified	c. THIS PAGE unclassified			

HOMESPUN AND MICROCHIPS: INDIA'S ECONOMIC DICHOTOMY

“[A] few million urbanites, white collar workers, trade union leaders, large farmers, blackmarketeers, politicians, police officers, journalists, scholars, stockbrokers, bureaucrats, exporters and tourists can now drink Coke, watch Sony television, operate Hewlett Packard personal computers, drive Suzukis and use Parisian perfumes, while the rest of the people live in anguish.”¹

-- Sundeep Waslekar

India is a study in contrasts. It is a nation that produces nuclear weapons and launches sophisticated satellites into geosynchronous earth orbit, yet 260 million (26%) of its citizens live beneath the official poverty line.² India's universities annually graduate thousands of the most talented scientists in the world, but the country's literacy rate is an appalling 52%.³ As in most countries, India is experiencing growing urbanization and budding industrialization, yet 70% of its workers still make their livelihood from agriculture.⁴ India is essentially two countries, one striving to become a world power and another deeply mired in the past. Depending on where one looks, an observer will see the India of microchips and high technology, or the India of Mohandas Gandhi and Mother Theresa.

In the early 1950s, India was described as an emerging economic power. Fifty years later the country is still trying to live up to that label. Upon gaining its independence in 1947, India's

¹ Shashi Tharoor, India: From Midnight to the Millennium (New York: HarperCollins, 1997), 175.

² Stanley Fischer, "Breaking Out of the Third World: India's Economic Imperative," International Monetary Fund, 22 January 2002, <<http://www.imf.org/external/np/speeches/2002/012202.html>> (19 February 2003).

³ Tharoor. 188.

⁴ Tharoor. 192.

leaders decided to use the power of the state to direct economic growth and reduce widespread poverty.⁵ The public sector controlled heavy industry, transportation, and telecommunications, while the private sector produced most consumer goods, but with heavy government regulation and oversight. India emphasized self-sufficiency rather than foreign trade and investment and imposed strict controls on imports, exports, and foreign ownership.⁶ This system initially produced significant economic growth, but by the 1960s this progress began to atrophy under the inefficiencies of socialist policies. Deficit spending throughout the 1970s and 80s brought on a balance-of-payments crisis in 1991. In order to receive an economic bailout by the International Monetary Fund, the ruling Congress Party opted to jettison its command economic policies and institute liberal reforms.

India is still struggling with this transition. On the one hand, the central government now understands that increased economic liberalization and integration will reinvigorate the economy. On the other, there are 28 state governments and seven union territories that demand social services and millions of new workers each year looking for employment. Many still embrace the socialist agenda and have put tremendous pressure on the central government to meet their needs. This paper looks at some of the major economic issues facing India today and posits salient questions for the country's leadership. Depending upon how New Delhi addresses these issues rests the future of the world's largest democracy. Will India enter the ranks of the world's great powers or will it remain a perennial emerging giant?

I.

⁵ James Heitzman and Robert L. Worden, ed., India: A Country Study (Washington, D.C.: GPO, 1996), 297.

⁶ Heitzman. 297.

Nehru's Legacy

Since 1991, India has made great strides in reducing state ownership and control of the economy while opening its markets to the rest of the world. The liberalization of trade has had a huge impact on the structure and efficiency of Indian industries, bringing new ideas and—more importantly—billions of dollars in foreign investment to the subcontinent. During the decade of the nineties, India's economic growth averaged a very respectable 6% per year led by strong advances in the services sector. Poverty has fallen significantly, from 55% of the population in 1974 to an estimated 26% in 2000.⁷

Despite these advances, economic analysts believe India can accomplish much more. A decade ago, India and China had roughly the same living standards. Today, the comparison could not be starker.⁸ China is flourishing while India's economic engine is starting to sputter. Today, the Indian growth rate in standard of living is 5%—less than half the Chinese rate.⁹ Most researchers believe this disparity is primarily due to a slackening in the pace of economic reforms in India and the central government's inability to broadly apply liberalization measures to all sectors of the economy.

Remnants of Nehru's command economy haunt virtually every aspect of India's reform program. Even after twelve years of progress, more than 40% of the country's capital base remains in government hands.¹⁰ Tariffs remain very high by international standards and foreign

⁷ Fischer. *Achievements and Challenges*.

⁸ William Lewis, *Unlocking Potential: Remove Barriers to India's Growth*, McKinsey & Company, 11 September 2001, <http://www.mckinsey.com/knowledge/articles/Unlocking_India.asp> (19 February 2003).

⁹ Lewis. *Unlocking Potential: Remove Barriers to India's Growth*.

¹⁰ Frank G. Wisner, "Building a Partnership For Growth," *India Infoline*, 8 December 2002, <<http://www.indiaonline.com/nevi/buld.html>> (19 February 2003), *Increasing Productivity and Expanding Opportunity Through Privatization*.

direct investment is extraordinarily low, especially compared to China.¹¹ Numerous other obstacles continue to choke the life breath from India's reforms, including the list of 830 products currently reserved for manufacture by firms below a certain size that eliminates economies of scale, and government layoff regulations that prohibit companies from effectively responding to fluctuations in the business cycle.¹² Although India has made significant progress in opening its economy, New Delhi is constantly being urged by the United States and other advanced capitalist countries to do more.

Questions: A recent survey of the Fortune 1000 found that more than 80% of companies were, or are planning, to bring some part of their business process offshore.¹³ Since India has relatively low rates of foreign direct investment, in what ways is the central government prepared to lower entrance barriers to attract this business? One barrier in particular has frustrated foreign firms from operating in India. Referred to as the "licensing raj," foreign companies are forced to pay high fees for permission to enter into business relationships with Indian counterparts. What strategy does the central government have for streamlining this process and removing such examples of economic "red tape?" Economic growth is being hampered by the high cost of capital. This is due, in large part, to the burden of servicing India's national debt. Since subsidies ranging from energy to food contribute to this debt load, what are the central or state governments proposing to ease this burden and find more efficient means for assisting the people and businesses of India?

¹¹ Fischer. Sustaining Stronger Growth.

¹² Lewis. Unlocking Potential: Remove Barriers to India's Growth.

¹³ Wisner. Assuring the Security of Information Pipelines.

For a Few Rupees More

India's high-tech industry, energized by direct foreign investment, domestic mergers, and the rapid deployment of new technologies, is now driving the economy of this nation of one billion people.¹⁴ The information technology industry accounts for about 3% of India's gross domestic product with a potential to touch around 8-9% levels in 2008. Moreover, it is a \$29 billion industry that is expected to grow by approximately 28% this year.¹⁵ Key to this explosion has been India's success in software services. The country offers two important advantages—a large pool of computer-trained professionals willing to work for a fraction of the salary of their US counterparts, and the geographic advantage of being located halfway around the world from the information-dominant mega-corporations headquartered in the United States.

The cost advantage of using Indian software firms is enormous. For example, a call operator (customer assistance) in India costs around \$150-200 per month, compared to an operator in the United States who costs around \$2,000-2,500.¹⁶ US firms in New York can also out-source software-related jobs to Indian firms at 5 o'clock in the afternoon and expect to have the results in their computer's inbox first thing the following morning. This type of around-the-clock coverage is particularly valuable in the fast-paced world of information technology that spawned the phrase "24-7 coverage."

The information technology sector is undoubtedly the brightest star in the Indian economic constellation. It is here that the most liberal reforms have been directed, particularly in the level

¹⁴ Aaron Chaze, "India's Economy Gets Wired," Global Finance, October 2000, 114. ProQuest (19 February 2003).

¹⁵ Vinod Chari, "IT—India Tomorrow," India Infoline, 17 February 2003, <<http://www.indiainfoline.com/cyva/feat/itid.html>> (19 February 2003).

¹⁶ Chari. Cost Advantage.

of foreign direct investment and trade. Western firms such as Cisco Systems, Lucent Technologies, Microsoft, and America Online are pouring millions of dollars into India. In turn, New Delhi is responding by creating Software Technology Parks where local firms receive export and tax incentives. The government has also set up Export Processing Zones in various locations that allow companies established inside the zone to have 100% foreign equity. These companies can export up to 75% of their production as long as they sell the remainder in the domestic market.¹⁷ These reforms are a huge step away from the nationalist, go-it-alone policies established by Nehru. Unfortunately, they have not been replicated in other sectors.

Questions: Many western firms view India only as a source for cheap information technology labor (outsourcing) and “body shopping” (sending programmers overseas on a contract basis). India is also experiencing competition in these areas from firms established in Ireland, China, and the Philippines.¹⁸ What are Indian firms doing to avoid being typecast as merely software experts, but as IT professionals who can perform such high-paying and high-profile projects as e-business development and end-to-end business/system consulting? As many as 80% of India’s best trained scientists and engineers annually seek opportunities abroad.¹⁹ What is the government doing to stem this technological “brain drain” and keep India’s young scientists employed at home? A huge roadblock to additional foreign direct investment in such areas as biotechnology and pharmaceuticals is the issue of intellectual property rights. What is India doing to safeguard these products and strengthen respect for international patents and the intellectual property regime?

¹⁷ “Government Initiatives,” India Infoline, 20 December 2002, <<http://www.indiainfoline.com/sect/itso/ch07.html>> (19 February 2003).

¹⁸ Tom Field, “For a Few Rupees More,” CIO, December 2000, 168-178. ProQuest (19 February 2003).

“The Most Perverse Market for Electricity in the World”²⁰

India is dogged by electricity shortages that result from a bizarre mix of brazen theft, a politicized regulatory system, and lingering statism.²¹ According to India’s Central Electricity Authority, 21% of all the electricity generated in India was stolen in 2000.²² The poor routinely tap into overhead power lines and legitimate customers are rarely billed for these services. According to the Karnataka State Electricity Board, only 37% of Karnataka’s total power consumption is metered, leaving the state little indication as to who its customers are.²³ During the summer months when local temperatures soar, electrical “brown outs” are common. Peak period shortages averaged 13% in 2000, meaning more than one eighth of the country’s power demand was not met.²⁴

Chronic power shortages affect the daily lives of every Indian. Perhaps more importantly, these lapses have a direct impact on the country’s manufacturing sector. When the lights go out, India’s machines grind to a halt. “According to *Power Line*, an Indian electricity-industry journal, power shortages shave 2.5% from India’s gross domestic product annually.”²⁵ Given this situation, it is not surprising to learn that India is perhaps the world’s largest market for power stabilizers and voltage correctors. Foreign direct investment in this sector has been

¹⁹ Wisner. Building Up India’s Proven Capacity to Innovate in IT.

²⁰ “India’s Economy: Many Obstacles Still Ahead,” *The Economist*, 4 March 2000, 70-72 . ProQuest (19 February 2003).

²¹ Ian MacKinnon, “Power Outage: The Economy is Crippled by Electrical Shortages,” *Newsweek*, 22 January 2001, 52. ProQuest (19 February 2003).

²² MacKinnon. 52.

²³ “India’s Economy: Many Obstacles Still Ahead.” 71.

²⁴ MacKinnon. 52.

²⁵ MacKinnon. 52.

tainted by the political machinations surrounding a deal by the Indian state of Maharashtra and a consortium led by the Houston-based Enron Corporation in 1993. This project was approved by the Congress Party, but heavily criticized by Hindu-nationalist parties as being a sellout to Western interests. When the Bharatiya Janata Party came to power in 1995 it cancelled the deal. The project was restored after considerable legal haggling, but no new power has yet been added to the Indian grid. The off-again, on-again nature of this deal severely impacted the Indian economy as several other Western firms exploring similar investments in India pulled out.²⁶

Questions: India's electric power costs are among the highest in the world.²⁷ One of the prime reasons for this has been the subsidies and inefficiencies derived from the state monopoly of this sector. What are state governments doing to entice foreign investment and partnership in this vital market? What reforms are the State Electricity Boards considering to accurately determine its customers (metering) and secure revenue for services provided? Subsidies limit State Electricity Board incentives to prevent blackouts and maintain power lines—all tasks private firms do better.²⁸ Does the central government have plans to privatize the boards?

It's Not Easy Being Green

Agriculture has traditionally been India's most important economic sector.²⁹ It employs the majority of the country's workforce and currently contributes 24% to the national gross domestic product. Agricultural development was the priority of India's first five-year economic plan

²⁶ Tharoor. 182-3.

²⁷ "Software Risk Factors," India Infoline, 20 December 2002, <<http://www.indiaonline.com/sect/itso/ch08.html>> (19 February 2003), Availability of Infrastructure.

²⁸ Lewis. Unlocking Potential: Remove Barriers to India's Growth.

²⁹ Heitzman and Worden. 381.

initiated in 1951. This program was critical to a number of national goals such as reducing rural poverty, decreasing dependence on foreign food imports, and supplying agricultural raw materials for the textile and other industries.³⁰

In the mid 1960s, the introduction of high-yielding varieties of seeds and the increased use of fertilizers and irrigation are known collectively as the Green Revolution.³¹ This program was started with the help of the US-based Rockefeller Foundation and continued successful agricultural experiments developed first in Mexico and in the Philippines. The Green Revolution, however, was not applied evenly throughout the country. The high-yielding seeds were only used in those areas with assured supplies of water and the means to control it. As such, the spectacular increases in crop yields (particularly wheat at 800%) were primarily limited to India's agrarian northwest.

"The Green Revolution was successful in meeting the goals of self-sufficiency in food-grain production and adequate buffer stocks by the end of the 1970s."³² With the help of adequate seasonal monsoons, India feels confident in its ability to feed its people and maintain sufficient food reserves to meet failed harvests or market fluctuations. The central government would like to spread the benefits of the Green Revolution throughout the country, but this requires addressing such difficult political issues as land reform, price supports for key grains, and infrastructure improvement.

Questions: India has the potential to become a net food exporter, particularly in rice, many types of fruit, and even flowers. Farmers are reluctant to diversify their crops due to artificially

³⁰ Heitzman and Worden. 392.

³¹ Heitzman and Worden. 410.

³² Heitzman and Worden. 393.

high price supports for food grains. Does the central government have the political will to abolish or minimize price controls and allow market forces to determine the variety and prices of crops? The growth in government food stocks (in amounts far in excess of what is needed for food security) is a substantial drain on the economy. Much of this can be attributed to government procurement agencies and overly centralized agricultural processing policies. What reforms are the central government considering in the critical areas of trade and movement of agricultural commodities?

II.

No Drastic Changes

India is at an economic crossroad. The success gained in the 1990s may not last. In fact, growth rates have slipped over the past five years and while much of this can be attributed to the global economic downturn, the erosion of key “brick and mortar” industries such as manufacturing provide a dark omen for the first decade of the new millennium. There are bright spots to be sure—India’s information technology and biotechnology sectors are world-class, but they contribute only a fraction to the country’s overall gross domestic product.

India is struggling with an enormous dilemma. Economic leaders know what must be done to unleash the economic potential of the subcontinent. But will India’s political leaders sufficiently relax government control of the economy to allow the liberalization policies to take hold? The world’s largest democracy must create 8 million new jobs per year to keep its burgeoning population adequately employed.³³ Eliminating subsidies or protectionist economic policies could unleash a violent backlash if millions of Indians lose their jobs or see their cost of

³³ Tharoor, 193.

living rise out of sight. The dilemma facing leaders in New Delhi is the perceived choice of political survival or economic prosperity.

New Delhi has moved boldly in the information technology sector, but much more cautiously in those areas of the economy that supply basic needs. This dichotomy appears illogical at first, but actually makes economic and political sense. Change has always come slowly to India. For a country of one billion people, speaking over 800 dialects and practicing over a dozen major religions, sudden change is a dangerous if nearly impossible option. Carefully moving forward has maintained the invisible cords that bind this diverse nation together. Slowly moving toward a more liberal economy, all the while minimizing the short-term negative consequences on the voters, appears to be the most prudent prescription for India's success.

BIBLIOGRAPHY

- “Asia: Marching On; India’s Economy.” The Economist. 29 June 2002. 39. ProQuest (19 February 2003).
- Bajpai, Nirupam. “A Decade of Economic Reforms in India: The Unfinished Agenda.” Center for International Development. Working Paper No. 89. March 2002.
<<http://www.cid.harvard.edu/cidwp/089.html>> (19 February 2003).
- Chari, Vinod. “IT—India Tomorrow.” India Infoline. 17 February 2003.
<<http://www.indiaonline.com/sect/itso/ch08.html>> (19 February 2003).
- Chaze, Aaron. “India’s Economy Adjusts for Global Growth.” Global Finance. October 1999. 79-82. ProQuest (19 February 2003).
- Chaze, Aaron. “India’s Economy Gets Wired.” Global Finance. October 2000. 114-115. ProQuest (19 February 2003).
- Cohen, Stephen P. “India: Old Issues and New Opportunities.” The Brookings Review. Fall 2000. 18-4. 30-33. ProQuest (19 February 2003).
- Cooper, Kenneth J. “How India Holds Itself Back.” The Washington Post. 30 May 1999. B02. ProQuest (19 February 2003).
- “Economic Outlook: India.” Business Asia. 15 May 2000. ProQuest (19 February 2003).
- Field, Tom. “For A Few Rupees More.” CIO. 1 December 2000. 168-178. ProQuest (19 February 2003).
- Fischer, Stanley. “Breaking Out of the Third World: India’s Economic Imperative.” International Monetary Fund. 22 January 2002.
<<http://www.imf.org/external/hp/speeches/2002/012202.html>> (19 February 2003).
- Heitzman, James, and Robert L. Worden, ed. India: A Country Study. Washington, D.C.: GPO, 1996.
- “India.” Library of Congress Country Studies.
<[http://lcweb2.loc.gov/cgi-bin/quesry/r?frd/cstdy:@field\(DOCID+in0121\).html](http://lcweb2.loc.gov/cgi-bin/quesry/r?frd/cstdy:@field(DOCID+in0121).html)> (13 February 2003).
- India: Country Profile 2002. The Economist Intelligence Unit. London. 2002.
- “India Development Forum Highlights Poverty Challenge.” World Bank. M2 Presswire. 25 May 2000. ProQuest (19 February 2003).

“India’s Economy: Many Obstacles Still Ahead.” The Economist. 4 March 2000. ProQuest (19 February 2003).

“Indian Economy: Global Economic Indicators.” India Infoline. 16 July 2002.
<<http://www.indiainfoline.com/econ/glob/glec.html>> (19 February 2003).

“Indian Economy: Ninth Five Year Plan.” India Infoline. 16 July 2002.
<<http://www.indiainfoline.com/econ/andb/plan/plan1.html>> (19 February 2003).

Karp, Jonathan. “Bold Economic Steps Unlikely for India—Congress Party Lacks Clout to Revive its Reforms After Government’s Fall.” Wall Street Journal. 20 April 1999. A18. ProQuest (19 February 2003).

Karp, Jonathan. “India Predicts a Recovery, but Economics Scoff—Farm Woes Cloud Outlook for 1999.” Wall Street Journal. 10 February 1999. A14. ProQuest (19 February 2003).

Krishnadas, K. C. “India’s Manufacturing Startups Vying for Funds.” Electronic Engineering Times. 2 October 2000. ProQuest (19 February 2003).

Lewis, William. “Unlocking Potential: Remove Barriers to India’s Growth.” McKinsey & Company. 11 September 2001.
<http://www.mckinsey.com/knowledge/articles/Unlocking_India.asp> (19 February 2003).

MacKinnon, Ian. “Power Outage: The Economy is Crippled by Electrical Shortages.” Newsweek. 22 January 2001. 52. ProQuest (19 February 2003).

Mookherjee, Dilip. ed. Indian Industry: Policies and Performance. Delhi: Oxford University Press. 1995.

Slater, Joanna. “An Uneasy State.” Far Eastern Economic Review. 3 October 2002. ProQuest (13 February 2003).

“Software Government Initiatives.” India Infoline. 20 December 2002.
<<http://www.indiainfoline.com/sect/itso/ch07.html>> (19 February 2003).

“Software Risk Factors.” India Infoline. 20 December 2002.
<<http://www.indiainfoline.com/sect/itso/ch08.html>> (19 February 2003).

Tharoor, Shashi. India: From Midnight to the Millennium. New York: HarperCollins, 1997.

Vajpayee, Shri Atal Bihari. “Inaugural Address to the 90th Session of the Indian Science Congress.” India Infoline. 3 January 2003.
<<http://www.indiainfoline.com/nevi/vajp.html>> (19 February 2003).

Varadarajan, Tunku. "Why the Subcontinent Is Subpar." Wall Street Journal. 19 March 2001. ProQuest (19 February 2003).

Wisner, Frank G. "Building a Partnership For Growth." India Infoline. 14 December 2002. <<http://www.indiainfoline.com/nevi/buld.html>> (19 February 2003).

Wolpert, Stanley. A New History of India. New York: Oxford University Press. 2000.